

Cédric Honnet

French nationality
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Embedded Systems Engineer

Always enthusiastic about an infinity of subjects including interactivity, multimedia, robotics and arts, I really love discovering new technologies... I am a curious and persevering person and I am looking for a R&D position in a passionate environment.

Check-out the internet version of this resume, more detailed, at honnet.eu

Education

- 2011 **Master of engineering**, Major in Embedded Systems, *with honors*
Télécom ParisTech, Paris - France
"One of the most prestigious and selective grandes écoles in France"
- 2008 **Master 1 in electronics & computer engineering**, Major in Digital Electronics, *with honors*
Pierre & Marie Curie University (Paris VI), Paris - France
- 2007 **Bachelor of electronics & computer sciences**, Major in signal processing, *with honors*
Brunel University, London - United-Kingdom

Professional experience

Sifteo, *start-up*, San Francisco, CA - US

2012 - present

Embedded Systems & interHacktivity, Engineer

Worked on several soft/firmware elements: user interface (sounds/graphics), battery management, simulator, graphics controller, bootloader reliability.
Hackathons: implemented a gestures recognition system using the GRT Toolkit from MIT, added a MIDI interface to control music software, developed an audio communication system to send data to smartphones.
(reference : honnet.eu/merrill.pdf)

Tangible Display, *start-up*, Paris - France

2011 - present

Embedded Systems R&D, Engineer & co-founder

RitaDagaz projects (in progress): collaboration with an artist to make her installations interactive (see bit.ly/RitaDagaz).
BAD project (Body Air Drum): wireless MIDI instrument using arduino and nordic RF communication (see bit.ly/BodyAirDrum).
SonArt project: multimedia security system offering interactive information for the "Art Décoratifs" museum using a Kinect and processing.org (see bit.ly/sonart).

Sigma Designs, *Electronic & multimedia industry*, San Francisco Bay Area, CA

2010 - 8 months

Video codec R&D, intern

Google's VP8 Video Decoder Porting on a configurable Processor (reference: honnet.eu/rizvi.pdf)
- Firmware improvement for optimizing memory management and accelerating execution.
- Hardware instruction customization for specific purposes such as arithmetic decoding or binary tree decoding.

COMELEC, Télécom ParisTech, *state-run research laboratory*, Paris - France

2008 - 3 months

Digital electronics, intern

Use of an Altera FPGA development board to accelerate computation of digital operators reliability using probabilistic models. This was CoDesigned with NIOS 2 using C for the soft-processor program and VHDL for the coprocessor. My report can be downloaded here: bit.ly/reliabEval (french).

Centre for Media Communications Research (CMCR), *state-run research laboratory*, London - United-Kingdom

2007 - 3 months

Signal processing, intern

Design of audio signal restoration tools using Matlab and CoolEditPro. Design of digital operators for signal processing to be used on the FPGA of the USRP (Universal Software Radio Peripheral).

Academic projects

2011 - The RoseWheel project: conception for the ROSE course of a remotely controllable "self-balancing vehicle" - [website](#)

Worked in a team of 4 persons during 12 weeks. Based on the mechanics of the Zraag project. Selection of appropriate electronic components, PCB conception (schematics, placement, routing), implementation of all the embedded software using FreeRTOS (drivers, filtering, feedback control, security, remote control). Remote control implemented using an Android application. (reference: honnet.eu/st.zip)

2010 - Conception of a System on Chip for real time video processing - [pdf](#)

Worked in a team of 4 persons during 12 weeks to design a special effects coprocessor (and its software) for FPGA or ASIC (see sen.enst.fr/ue/elec342). Development from high level using System C for the behavioural fast simulation (see soci.fr) to the low level using System Verilog for the synthesis.

2010 - Implementation of a Man-In-the-Middle attack on a bank smart card

Study and implementation of an attack published by the university of Cambridge called "Chip and PIN is Broken". Design of a device with a fake smart card and a development board to generate control signals, intercept messages and reply.

2009 - Different Security & Embedded Systems introduction projects

Realization of a Boot-Loader on an ARM7 microcontroller on a Samsung development board using C and assembly languages. Benchmark development for GemAlto Java Card, test of attacks using time of operations analysis.

Skills

Languages	C, C++, Shell, Python, SystemC, Verilog, VHDL, Assembly, Matlab...
Electronics	PCB, FPGA, ARM/PIC/NIOS2, Bluetooth/Nordic RF, Arduino...
Various	Make, Git, FreeRTOS, Android, Linux

Extras

Music	Member of a Latino-American group (gatosNegrosProd.com); sound engineer (radio/home-studio)
Robotics	Member of the Telecom Robotics society. Finished 16th out of 128 teams in the 2009 Eurobot Cup.
Sport	Martial arts (Brazilian Jujitsu, Kenpo black belt & 2006 France Champion), Qi-Gong...
Trips	US, UK, India, Colombia, Bolivia, Argentina, Mexico, Spain, Portugal, Thailand, Laos, Cambodia...
References	Available upon request (check-out my LinkedIn profile: linkedin.com/in/honnet).